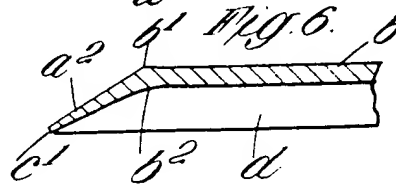
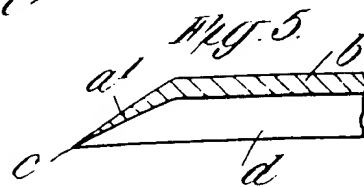
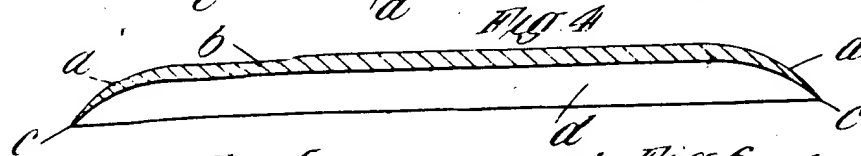
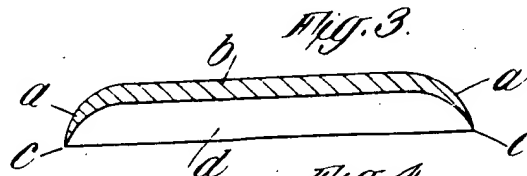
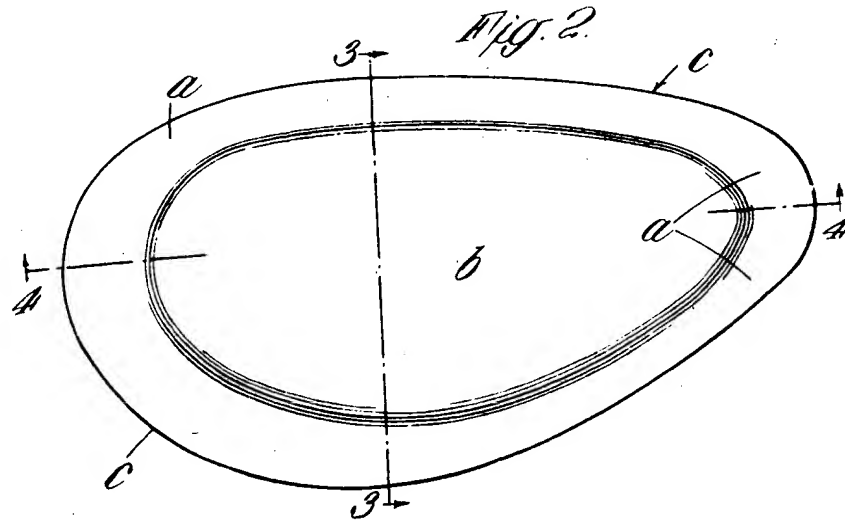
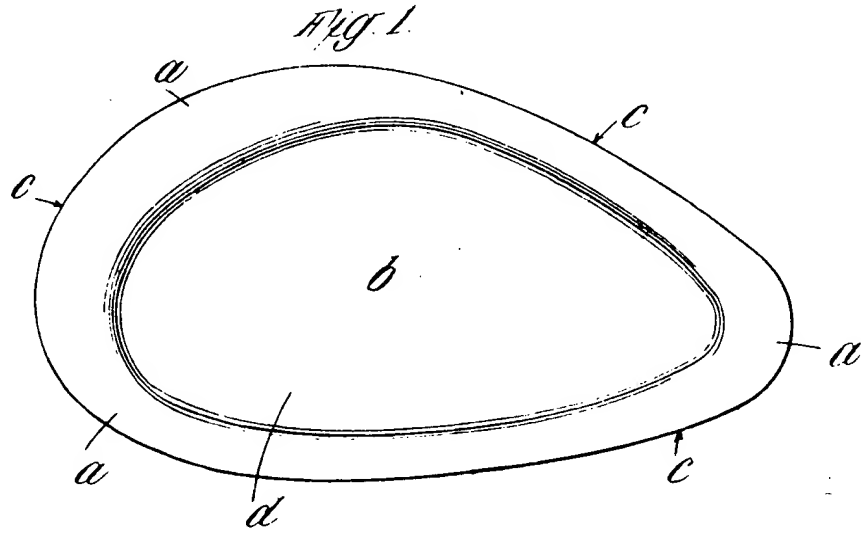


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[This Drawing is a reproduction of the Original on a reduced scale.]



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PATENT SPECIFICATION

Application Date: May 2, 1928. No. 12,948/28.

302,111



Complete Accepted: Dec. 13, 1928.

COMPLETE SPECIFICATION.

Improvements in or relating to Soles for use on Boots and Shoes.

I, SVEN ADOLF JOHAN HOLMQUIST, a subject of the King of Sweden, of 4, Union Place, Wells Street, London, W. 1, Business Representative, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to soles for use on boots and shoes, the soles being of the kind adapted to be attached by an adhesive to worn soles of boots and shoes. It is found that in the wearing of boots and shoes, the soles tend to curve upwardly towards the margins or to wear away more quickly at the margins than the parts surrounded thereby. This causes considerable difficulty and labour in securing by an adhesive known forms of new or attachment soles to the worn surfaces owing to the fact that continuous pressure has to be applied to the margins until the adhesive has set. Even when the new or attachment soles are thus firmly secured 25 parts of the margins become detached by reason of such parts being unequally strained and held in position, the adhesive in many cases failing to efficiently secure the margins to the corresponding parts of the worn soles when the boots or shoes are in use, the continuous bending and unbending of the soles during walking causing this to occur. In an endeavour to overcome these disadvantages it has 30 been already proposed in Specification No. 14,874 of 1893 to secure by the use of cement or by nailing or stitching to the undersurface of the sole on a boot or shoe a new or attachment sole provided with a dished or hollowed out upper surface the outwardly projecting margin thereof being curved and extending upwardly from the body of the sole and being reduced in thickness towards the outer 45 edge, while it has also been previously proposed in Specification No. 132,204 to provide rubber soles which are secured or positively nailed with a flat body portion and an upstanding marginal position reduced in thickness towards its outer edge.

According to the invention, the new or [Price 1/-]

attachment sole is secured in position by an adhesive and comprises a flat body 55 portion with a plain tread surface and a curved margin which extends outwardly and upwardly in such a manner that the upper recessed surface of the attachment sole is of greater concavity than the rounded off surface of the worn sole of the boot or shoe, the difference between the said upper surface and the rounded off surface serving to cause the thin edge of the outwardly tapering margin of the new or attachment sole to cling to the said worn boot or shoe sole and thus assist the adhesive in securing the new or attachment sole to the worn boot or shoe sole. The attachment sole may be made 70 of india rubber, gutta percha, balata, leather substitutes or similar materials capable of being moulded or pressed into shape. Where india rubber or similar material capable of being vulcanised is employed, the attachment soles are preferably moulded or pressed into shape first and afterwards transferred into the vulcaniser.

In order that the said invention may be clearly understood and readily carried 80 into effect, the same will now be more fully described with reference to the accompanying drawings, in which:— Figures 1 and 2 are plan views respectively of the top and bottom surfaces of an attachment sole constructed according to the invention.

Figures 3 and 4 are transverse sections respectively taken on the lines 3—3 and 4—4 of Figure 2.

Figures 5 and 6 are sectional views of parts of attachment soles illustrating alternative constructions according to the invention.

The sole shown in Figures 1 to 4 inclusive is composed of rubber and provided with a surrounding margin *a* which is of curved formation tending to extend at right angles to the general body *b* of the sole and gradually tapering from the said body to a thin sharp edge *c*. The margin thus formed encloses a recessed or hollowed out part *d* adapted to receive the worn sole attached to a boot or shoe and to engage with the entire surface thereof.

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the surrounding margin *a* tending to engage with the corresponding part of the worn sole prior to the body part *b* when the attachment sole is arranged in position thereon. Thus, the engagement of the margin *a* with that of the worn sole is ensured after the attachment sole has been secured in position by an adhesive, there being no necessity to apply continuous pressure at the margin during the setting or hardening of the adhesive. The upstanding surrounding margin *a* also tends to adhere to the margin of the worn sole when the boot or shoe is in use in that the shaped attachment sole tends to bend or unbend exactly in accordance with the worn sole no part of the attachment sole being under tension relatively to the worn sole, while the margin *a* is inclined to be slightly under compression owing to the margin being in many cases of slightly greater curvature or inclination than the margin of the worn sole on the boot or shoe. Not only is the attachment sole better adapted to adhere to a worn sole than hitherto, but the reduced or thin edge imparts an improved finish to a boot or shoe provided therewith. Further the concave attachment soles are of greater elasticity than flat soles by reason of the upstanding surrounding margin *a*.

The modified constructions shown in Figures 5 and 6, respectively comprise a flat tapering margin *a*¹ angularly disposed on each side relatively to the outer and inner surfaces of the body *b*, and a tapering margin *a*² provided with a square edge *c*¹ and angularly disposed with an angular edge *b*¹ to the outer surface and a curved intermediate portion *b*² with the inner

surface of the said body *b*, otherwise the margins in both cases extend at an angle to the general plane of the body *b* for constituting the recessed or hollowed out part *d* for receiving the worn sole of a boot or shoe. 45

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:— 50

1. An attachment sole which is secured in position on a worn sole of a boot or shoe by an adhesive and comprises a flat body portion with a plain tread surface and a curved margin which extends outwardly and upwardly in such a manner that the upper recessed surface of the attachment sole is of greater concavity than the rounded off surface of the worn sole of the boot or shoe, for the purpose specified. 55 60

2. A rubber sole for attachment to a worn sole of a boot or shoe by means of an adhesive constructed substantially as hereinbefore described with reference to any of the examples illustrated in the accompanying drawings. 65

3. A boot or shoe provided with a rubber sole secured in place by an adhesive substantially as hereinbefore described with reference to any of the examples illustrated in the accompanying drawings. 70

Dated this 2nd day of May, 1928.
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 Agents for the Applicant.